

General

Title

Imaging efficiency: percentage of MRI of the lumbar spine studies with a diagnosis of low back pain on the imaging claim and for which the patient did not have prior claims-based evidence of antecedent conservative therapy.

Source(s)

Centers for Medicare and Medicaid Services (CMS). Hospital outpatient quality reporting specifications manual, version 11.0. Baltimore (MD): Centers for Medicare and Medicaid Services (CMS); Effective 2018 Jan. various p.

Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation, The Lewin Group. MRI lumbar spine for low back pain (OP-8): 2017 annual reevaluation report. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 2017. 31 p.

Measure Domain

Primary Measure Domain

Related Health Care Delivery Measures: Use of Services

Secondary Measure Domain

Clinical Efficiency Measures: Efficiency

Brief Abstract

Description

This measure is used to assess the percentage of magnetic resonance imaging (MRI) of the lumbar spine studies with a diagnosis of low back pain on the imaging claim for which the patient did not have prior claims-based evidence of antecedent conservative therapy.

Rationale

Acute low back pain, with or without radiculopathy, is one of the most common health problems in the United States (Bradley, 2007). It is estimated that the prevalence of low back pain in North America at

any given time is 5.6% (Loney & Stratford, 1999). According to the American College of Radiology (ACR), uncomplicated acute low back pain is a benign, self-limited condition that warrants no imaging studies (Bradley, 2007). Despite consensus that there is little value in diagnostic imaging for acute low back pain, significant practice variation exists for imaging resources, including x-ray imaging, computed tomography (CT), magnetic resonance imaging (MRI), bone scans, and ultrasound imaging (Modic et al., 2005). Such use has important cost implications, largely due to the high cost of imaging studies and specialty referrals (Rao et al., 2002). The cost of evaluating and treating acute low back pain runs into billions of dollars annually, not including time lost from not working (Luo et al., 2004).

Evidence for Rationale

Bradley WG Jr. Low back pain. AJNR Am J Neuroradiol. 2007 May;28(5):990-2.

Loney PL, Stratford PW. The prevalence of low back pain in adults: a methodological review of the literature. Phys Ther. 1999 Apr;79(4):384-96. [43 references] [PubMed](#)

Luo X, Pietrobon R, Sun SX, Liu GG, Hey L. Estimates and patterns of direct health care expenditures among individuals with back pain in the United States. Spine (Phila Pa 1976). 2004 Jan 1;29(1):79-86. [PubMed](#)

Modic MT, Obuchowski NA, Ross JS, Brant-Zawadzki MN, Grooff PN, Mazanec DJ, Benzel EC. Acute low back pain and radiculopathy: MR imaging findings and their prognostic role and effect on outcome. Radiology. 2005 Nov;237(2):597-604. [PubMed](#)

Rao JK, Kroenke K, Mihaliak KA, Eckert GJ, Weinberger M. Can guidelines impact the ordering of magnetic resonance imaging studies by primary care providers for low back pain. Am J Manag Care. 2002 Jan;8(1):27-35. [PubMed](#)

Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation, The Lewin Group. MRI lumbar spine for low back pain (OP-8): 2017 annual reevaluation report. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 2017. 31 p.

Primary Health Components

Low back pain (LBP); magnetic resonance imaging (MRI); lumbar spine; antecedent conservative therapy

Denominator Description

Number of magnetic resonance imaging (MRI) of the lumbar spine studies with a diagnosis of low back pain on the imaging claim (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Of beneficiaries in the denominator, number of magnetic resonance imaging (MRI) of the lumbar spine studies with a diagnosis of low back pain without the beneficiary having claims-based evidence of prior antecedent conservative therapy (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A systematic review of the clinical research literature (e.g., Cochrane Review)

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

See "MRI Lumbar Spine for Low Back Pain (OP-8) 2017 Annual Reevaluation Report" for a literature review summarizing clinical guidelines and other scientific evidence relevant to the importance and scientific acceptability of this outpatient imaging efficiency measure.

Evidence for Additional Information Supporting Need for the Measure

Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation, The Lewin Group. MRI lumbar spine for low back pain (OP-8): 2017 annual reevaluation report. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 2017. 31 p.

Extent of Measure Testing

During the measure development process, the Centers for Medicare and Medicaid Services (CMS) completed quantitative testing of the measure's specifications, including evaluation of the measure's scientific acceptability and feasibility of implementation by a Technical Expert Panel. A dry run, evaluating measure performance at each facility eligible for public reporting, was performed prior to measure implementation; no major stakeholder concerns were raised about the specifications, feasibility, or usability at that time. The measure was first endorsed by the National Quality Forum in 2008; its endorsement was removed in 2017.

CMS continues to monitor stakeholder inquiries for concerns about measure calculation or scientific acceptability; feedback received through this vehicle can feed into the measure update cycle, as is appropriate. In fall 2015, CMS completed a robust evaluation of the measure's importance, scientific acceptability (including reliability and validity), feasibility, and usability and use.

Evidence for Extent of Measure Testing

McKiernan C. (Consultant, The Lewin Group, Falls Church, VA). Personal communication. 2016 Feb 9. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Ambulatory Procedure/Imaging Center

Hospital Outpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Specified

Target Population Age

Unspecified

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Priority

Making Quality Care More Affordable

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Not within an IOM Care Need

IOM Domain

Effectiveness

Efficiency

Data Collection for the Measure

Case Finding Period

Encounter dates: July 1 through June 30

Denominator Sampling Frame

Enrollees or beneficiaries

Denominator (Index) Event or Characteristic

Clinical Condition

Diagnostic Evaluation

Encounter

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Number of magnetic resonance imaging (MRI) of the lumbar spine studies with a diagnosis of low back pain (LBP) on the imaging claim

Initial Patient Population: This measure applies only to Medicare beneficiaries enrolled in original, fee-for-service (FFS) Medicare who were treated as outpatients in hospital facilities reimbursed through the Outpatient Prospective Payment System (OPPS). These measures do not include Medicare managed care beneficiaries, non-Medicare patients, or beneficiaries who were admitted to the hospital as inpatients.

Beneficiaries included in the measure's initial patient population had documentation of MRI of the lumbar spine studies with a diagnosis of low back pain on the imaging claim performed at the hospital outpatient department within a one-year window of claims data. Beneficiaries can be included in the measure's initial patient population multiple times; each MRI lumbar spine study with a diagnosis of low back pain on the imaging claim performed at a facility measured by OPPS is counted once in the measure's denominator.

Note: If a beneficiary had more than one MRI lumbar spine study on the same day only one study would be counted. However, if a beneficiary had multiple studies during the measurement period, each study would be counted (i.e., the beneficiary can be included in the denominator count more than once).

Exclusions

Beneficiaries who have a clinical diagnosis of one or more conditions for which imaging is considered appropriate (called "red flag conditions") are excluded from the measure. These include: beneficiaries with lumbar spine surgery in the 90 days prior to the MRI, cancer, congenital spine and spinal cord

malformations, inflammatory and autoimmune disorders, infectious conditions, spinal vascular malformations and/or the cause of occult subarachnoid hemorrhage, spinal cord infarction, neoplastic abnormalities, treatment fields for radiation therapy, spinal abnormalities associated with scoliosis, syringohydromyelia, postoperative fluid collections and soft tissue changes, trauma, intravenous (IV) drug abuse, neurologic impairment, human immunodeficiency virus (HIV), unspecified immune deficiencies, and intraspinal abscess. Thus, any beneficiary with a history of one or more of these conditions is excluded from the measure.

Note: Refer to the original measure documentation for additional information on the measure's initial patient population, excluded conditions, such as look-back periods, and for Current Procedural Terminology (CPT), International Classification of Diseases, Ninth Revision (ICD-9), and International Classification of Diseases, Tenth Revision (ICD-10) code categories and corresponding organizational ID (OID) codes for the value set in the Value Set Authority Center (VSAC).

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Of beneficiaries in the denominator, number of magnetic resonance imaging (MRI) of the lumbar spine studies with a diagnosis of low back pain without the patient having claims-based evidence of prior antecedent conservative therapy

Indications of claims-based antecedent conservative therapy include any procedure codes in the three following groups:

Claim(s) for physical therapy in the 60 days preceding the lumbar spine MRI

Claim(s) for chiropractic evaluation and manipulative treatment in the 60 days preceding the lumbar spine MRI

Claim(s) for evaluation and management in the period greater than 28 days and less than 60 days preceding the lumbar spine MRI

Note:

For the numerator, measurement of prior conservative therapy is based on the claim date of the MRI of the lumbar spine, but then prior conservative therapy is examined at the beneficiary level within the defined periods relative to the MRI lumbar spine claim.

Thus, a beneficiary can be counted more than once in both the denominator and the numerator.

Refer to the original measure documentation for Current Procedural Terminology (CPT), International Classification of Diseases, Ninth Revision (ICD-9), and International Classification of Diseases, Tenth Revision (ICD-10) code categories and corresponding organizational ID (OID) codes for the value set in the Value Set Authority Center (VSAC).

Exclusions

None

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

OP-8 Calculation Algorithm

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a lower score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

OP-8: imaging efficiency measure: MRI lumbar spine for low back pain.

Measure Collection Name

Hospital Outpatient Quality Measures

Measure Set Name

Imaging Efficiency

Submitter

Centers for Medicare & Medicaid Services - Federal Government Agency [U.S.]

Developer

Funding Source(s)

United States Department of Health and Human Services

Composition of the Group that Developed the Measure

Centers for Medicare & Medicaid (CMS) Contractor

Financial Disclosures/Other Potential Conflicts of Interest

None

Measure Initiative(s)

Hospital Compare

Hospital Outpatient Quality Reporting Program

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2018 Jan

Measure Maintenance

This measure is reevaluated annually by responding to stakeholder input and incorporating advances in the science or changes in coding.

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates previous versions:

Centers for Medicare and Medicaid Services (CMS). Hospital outpatient quality reporting specifications manual, version 9.0a. Baltimore (MD): Centers for Medicare and Medicaid Services (CMS); Effective 2016 Jan 1. various p.

Centers for Medicare and Medicaid Services (CMS). OP-8: MRI lumbar spine for low back pain -- literature review. Baltimore (MD): Centers for Medicare and Medicaid Services (CMS); 2014 May. 26 p.

Centers for Medicare and Medicaid Services (CMS). OP-8: MRI lumbar spine for low back pain -- specifications. Baltimore (MD): Centers for Medicare and Medicaid Services (CMS); 2014 Apr. 12 p.

Measure Availability

Source available from the [QualityNet Web site](#) .

Check the QualityNet Web site regularly for the most recent version of the specifications manual and for the applicable dates of discharge.

NQMC Status

This NQMC summary was completed by ECRI Institute on August 29, 2012. The information was verified by the measure developer on November 26, 2012.

This NQMC summary was updated by ECRI Institute on May 7, 2014. The information was verified by the measure developer on August 8, 2014.

This NQMC summary was updated by ECRI Institute on December 22, 2015. The information was verified by the measure developer on February 9, 2016.

This NQMC summary was updated again by ECRI Institute on February 22, 2018. The information was verified by the measure developer on April 19, 2018.

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Production

Source(s)

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